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ABSTRACT

The purpose of this paper is to analyze the dimensions of sex role behavior. The Ben Sex Role Inventory (BSRI) was administered to 270 male and female undergraduate students. The BSRI contains 20 masculine characteristics (acts as a leader, ambitious, self-reliant), 20 female characteristics (warm, gentle, loves children), and 20 neutral characteristics. When taking a BSRI, a person indicates on a 1-7-point scale how well each of these characteristics describes himself or herself. Results indicate the data have three dimensions. The first dimension indicates a clear continuum of behaviors from masculine to neutral to feminine. The second dimension refers to whether items are positively or negatively evaluated. Masculine items were positively evaluated while feminine items were both positively and negatively evaluated. The third dimension deals with subroles within the traditional sex roles: masculine traits were instrumental in nature (acts as a leader, forceful) and competent (analytical, adaptable, reliable); feminine traits reflected behavior which is expressive, incompetent, and socially conventional. Results suggested the masculine role is more clearly defined and more readily learned than the feminine role, and that change, to the extent it is occurring, is within the feminine not the masculine role. (Author/JK)

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A MULTIDIMENSIONAL ANALYSIS OF
THE STRUCTURE OF SEX ROLES

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Traditional sex roles may be viewed as sets of behaviors and other attributes which are expected of persons because of their biological sex. For example, women are expected to be nurturant, intuitive, emotional, and passive, while men are supposed to be instrumental, intellectual, athletic, and aggressive. In other words, men are expected to be "masculine" and women are expected to be "feminine." As observed by Chafetz (1974) and others, sex roles define a great deal about us (i.e., the expectational sets have many elements) including our intellectual, emotional, physical, and behavioral characteristics. Moreover, traditional sex role stereotypes actually portray the sexes as being totally opposite in most respects. While men are stoical, women are emotional; women are passive, men are aggressive; etc. Despite pressure for change from feminists and other forces, recent studies (e.g., Broverman et al., 1972; Weitzman, 1975) show that many individuals continue to hold and conform to such differential expectations for women and men. While theoretically it is possible to have social roles which are different (i.e., sex role differentiation) but equal, research studies (e.g., Broverman et al., 1972; McKee and Sherriffs, 1957) indicate that sex roles are not equal, with the masculine role accorded higher social status and prestige than the feminine role (i.e., sex role stratification).¹

Thus, traditional sex roles have two components--men exhibit the "masculine" set of behaviors and women specialize in the "feminine" set of

¹ There are of course exceptions to this generalization cross-culturally and within subcultures in the U.S. For example, Strodbeck (1951) noted that males had more status than females in the Mormon and Texan communities but not among the Navahoes in his study on decision-making in families.

behaviors and other characteristics. Bem (1975) has suggested that while many individuals do play such sex-typed roles, social behavior may be conceptualized more meaningfully as masculine, feminine or androgynous. Androgynous persons are not restricted to acting in the traditionally expected manner for their sex but are able to combine masculine and feminine traits in their role set and to act out whichever type of behavior is appropriate for a given situation. An example might be a woman who is nurturant and warm with children and yet clear thinking and assertive in occupational situations or a man who is both a competent scientist and enjoys being a good cook.

The purpose of this paper is to investigate further this question of the dimensionality of sex roles. By using a multidimensional scaling device, we hope to elicit and describe the dimensions and structure of sex role behavior.

Procedure

The sample was composed of 270 male and female students enrolled in undergraduate sociology courses at the University of Hawaii. As shown in Table I, the students were relatively homogeneous in age but varied with respect to ethnic identification. The most common ethnic groups in this sample were Caucasian, Japanese, Chinese, Hawaiian, and part-Hawaiian.

The Bem Sex Role Inventory (BSRI) was administered to the subjects (Bem, 1974). The BSRI contains 20 masculine characteristics and 20 feminine characteristics. Bem classified a characteristic as masculine if it were judged by two independent samples of undergraduates to be more desirable in American society

Table I. Distribution of Sample by Sex, Age, and Ethnic Identification (N = 270)

	Number	Percent
Sex		
Male	101	37%
Female	169	63
Age		
17 - 19	88	33
20 - 25	164	61
26 - 29	12	4
30 and above	6	2
Ethnic Identification		
Caucasian	55	20
Japanese	131	49
Chinese	25	9
Hawaiian and part-Hawaiian	27	10
Mixed	21	8
Other	11	4

for a man than for a woman (e.g., acts as a leader, ambitious, self-reliant) and feminine if it were judged to be more desirable in American society for a woman than for a man (e.g., warm, gentle, loves children). The remaining items are neutral characteristics (neither sex-typed as feminine or masculine) which vary with respect to their social evaluation as some are positively valued (e.g., happy, helpful, conscientious) while others are negative in value (e.g., moody, theatrical, unpredictable). When taking the BSRI, a person is asked to indicate on a seven-point scale how well each of these masculine, feminine, and neutral characteristics describes himself or herself. The scale ranges from 1 ("Never or almost never true") to 7 ("Always or almost always true"). Thus, for example, persons believing themselves almost always self-reliant would give themselves a score of 7 for that item.²

Pearsonian correlation coefficients between every BSRI item were computed and then subjected to smallest space analysis (Bloombaum, 1973; Guttman, 1968; Lingoes, 1968). This multidimensional scaling device represents each item as a point on a space diagram and the distance between the points reflects the correlation between the items. Thus, highly correlated characteristics are located close together, while items with low correlations are far apart from each other on the space diagram. Smallest space analysis (SSA) is used to elicit the number and

² The BSRI is a method for classifying individuals as masculine, feminine, or androgynous. Masculine individuals have higher scores on the masculine items than on the feminine items, feminine individuals score higher on the feminine items than the masculine items, and androgynous persons rate themselves equally high on the masculine and feminine items.

nature of the dimensions in the data. The goodness of fit of the particular dimensional solution is indicated by the coefficient of alienation which decreases in size as the goodness of fit increases. The nature of the dimensions in the data is determined by inspecting the configuration of points in the smallest space diagrams or model and drawing substantively meaningful partitions between the points representing the items.

Results

The data were initially analyzed in one through six dimensions to determine which dimensionality produces an acceptable fit to the data. The smaller the coefficient of alienation, the better the fit. The coefficient of alienation for the three dimensional solution was .15 which represents quite a good fit and indicates that the BSRI behavioral data actually has three dimensions. The next problem, then, is to explicate the nature of these dimensions.

Smallest space analysis expresses each variable (BSRI item) as a point in coordinate space with highly correlated items located close to each other. To analyze the data, a three dimensional model was constructed using three coordinates to locate the position of each variable. For simplicity of presentation, the space diagrams shown in Figures 1 through 3 are two dimensional projections of the three dimensional model. The space diagrams provide an accurate representation of the position of the points on the horizontal surface (first and second coordinates). The third dimension (third coordinate) portrayed in Figure 3 should be visualized as having upper and lower levels with the items circled in

broken lines nesting under the items circled in unbroken lines.

Inspection of the space diagram shown in Figure 1 reveals that the 60 BSRI items cluster into three very distinct areas.³ On the lower left of the diagram, every item (e.g., forceful, analytical, acts as a leader) is clearly masculine in nature. The items in the middle area are those which Bem classified as relatively neutral or non-sex-typed behaviors (e.g., happy, friendly, conceited). In contrast, items in the upper right area of the diagram are the feminine items-- loves children, tender, yielding, etc. A few deviations occur when neutral items (e.g., unsystematic, inefficient) are located in the area which is predominately feminine. This can indicate either error or that the items are considered more preferable for women than for men in this sample. However, the deviation is small and the trends in the data quite apparant. Thus, since there is a clear continuum of behaviors from masculine to neutral to feminine, this dimension will be called the sex role differentiation dimension.

What, then, is the second dimension of this behavioral data? As shown in Figure 2, the BSRI neutral items which are positively evaluated (e.g., conscientious, friendly, tactful) are all in the left region, while the neutral but negative items (e.g., conceited, moody, and secretive) appear in the right region. While Bem did not classify the masculine and feminine behaviors as positive or negative (since these items were classified as masculine when preferable for men and as

³ The space diagram generated by SSA represents each item by its variable number. For ease of inspection, the variable number has been replaced with the name of the item as shown on the BSRI questionnaire and the classification of the behavioral item by Bem as masculine, feminine, or neutral.

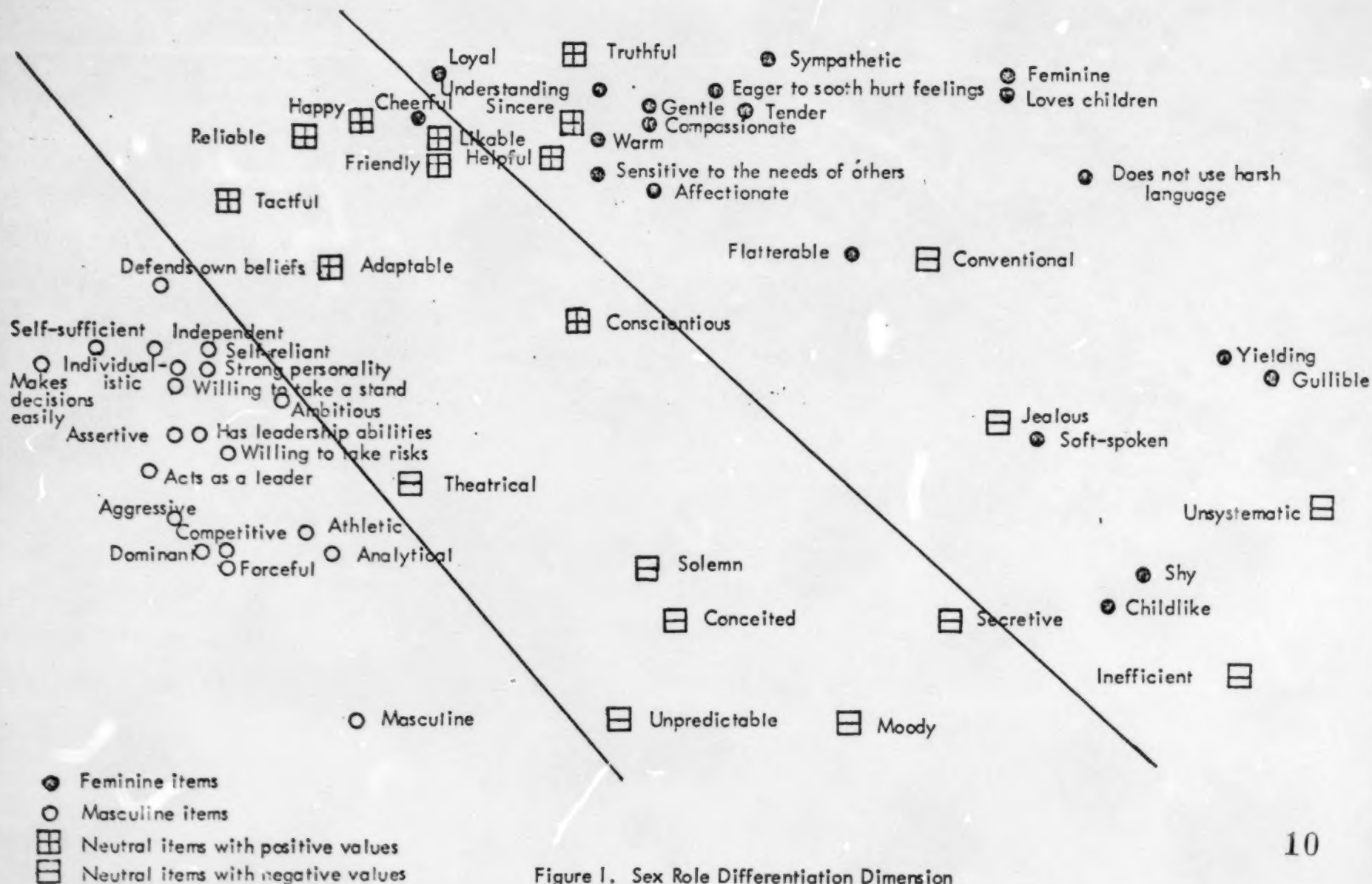


Figure 1. Sex Role Differentiation Dimension

feminine when valued more for women), the space diagram shown quite clearly that feminine items which would be generally considered positive traits in women (e.g., loves children, understanding, gentle) are in the same area as the non-sex-typed neutral traits which have positive social evaluations. Items which are expected of women but are not valued in our society (e.g., gullible, shy, etc.) are located near the neutral items which have unfavorable values (e.g., conceited, unsystematic, secretive). What then is the situation with the masculine characteristics? Actually, all masculine traits appear in the positively evaluated area. While this may reflect merely that Bem included only positively valued masculine traits in the BSRI, it may also reflect the general trend for masculine traits to have a positive evaluation in this society, while both socially desirable and undesirable traits are expected of women. Since the second dimension reflects a differential evaluation of behaviors as positive or negative, this dimension will be referred to as the sex role evaluation dimension.

The third dimension, shown in Figure 3, refers to the components of the masculine and feminine sex roles. The masculine traits, which are positioned on the left-hand side of the space diagram, are very tightly clustered and so somewhat difficult to analyze. However, if we examine the third dimension of the data, two distinctions within the male sex role appear. There is a cluster of traits (e.g., acts as a leader, makes decisions easily, forceful) which all seem to be instrumental in nature. Above these in three dimensional space are a smaller number of qualities which seem to refer more to being a competent person (e.g., analytical, athletic, adaptable, and reliable). The set of feminine

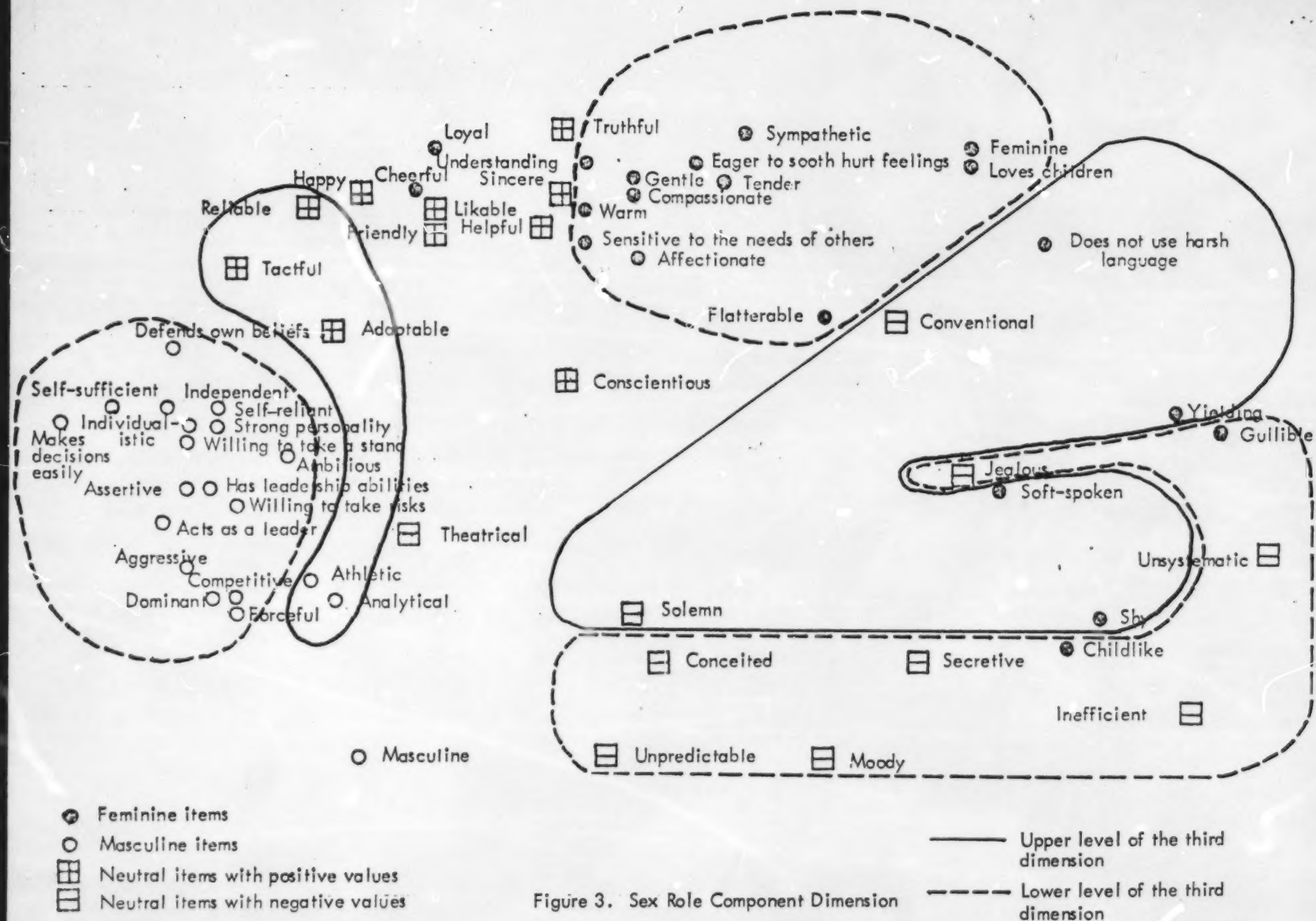


Figure 3. Sex Role Component Dimension

characteristics is more scattered but one tight cluster appears which is, in contrast to the masculine instrumental subrole, quite nurturant and expressive--the elements are loves children, affectionate, eager to soothe feelings, etc. Again, in contrast to the masculine traits reflecting competence, part of the female sex role involves an incompetent and susceptible aspect with behaviors such as inefficient, unsystematic, childlike, and gullible. While the masculine sex role was divided into two components, there appears to be a third meaningful partition of the feminine sex role located above the other two regions. A socially conventional or "ladylike" aspect is indicated by items such as conventional, soft-spoken, and does not use harsh language. This third dimension refers to aspects of the traditional male and female sex roles and so will be called the sex role component dimension.

Implications

Examination of the space diagrams has indicated that the social behaviors and characteristics on the BSRI when subjected to smallest space analysis actually have three distinct dimensions. The first dimension refers to sex role differentiation and is partitioned into masculine, neutral, and feminine. The second dimension is the sex role evaluation dimension since all the behaviors, sex-typed as well as non-sex-typed, partition into positive and negative evaluation regions. Of the sex-typed traits, the masculine items all are located in the positive area, whereas the feminine items are positioned in both the positive and the negative areas. The third dimension refers to subroles within the traditional

sex roles. The masculine role partitions into instrumental and competency areas, while the feminine role is divided into nurturant, conventional, and incompetency areas.

Some further implications can be drawn from the smallest space analysis. The arrays of behaviors in the BSRI are not randomly distributed in this sample--the feminine, masculine and neutral items are located in distinct areas. In other words, masculine behaviors intercorrelate highly with each other while feminine traits correlate highly with each other but masculine and feminine behaviors do not correlate highly with each other. This implies that for most of this sample, individuals play feminine or masculine roles rather than combining such behaviors in their repertoire. Also, when mixing does occur, it is likely to be between sex-typed behaviors and neutral behaviors, i.e., the person is self-reliant (masculine) and is adaptable (neutral) or is warm (feminine) and helpful (neutral).⁴

A striking aspect of the space diagram is the relatively tight clustering of the items in the masculine sex role area and the looser structuring of the elements in the feminine sex role area. This suggests that a "masculine" person will tend to display most or all of the masculine traits or, from another view, one needs to play this role in every respect to be "masculine." In contrast, the looser array of the feminine traits indicates that a person may be

⁴ Another implication is that some of the characteristics which Bem classified as neutral should be reclassified as feminine (e.g., helpful, sincere, unsystematic) since they are located close to the feminine items in the space diagram.

feminine by performing some but not necessarily all of the feminine sex-typed behaviors. In other words, there is only one way to be masculine, while there may be several paths to femininity. This suggests also that the masculine role is more clearly defined and learned more readily than the relatively diffuse feminine role, and that change, to the extent it is occurring, is within aspects of the feminine role not the masculine role.

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